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MOTORCYCLE HELMET USE LAWS

Motorcycle helmets offer motorcyclists involved in traffic crashes the best protection from head injury. The passage of helmet use laws governing all motorcycle riders is the most effective method of increasing helmet use. The National Highway Traffic Safety Administration (NHTSA) encourages states to enact legislation to require all motorcycle riders to wear helmets. Additionally, NHTSA strongly supports comprehensive motorcycle safety programs that include motorcycle helmet usage, rider education, motorcycle operator licensing, and responsible use of alcohol.

Key Facts

- In 1998, 2,284 motorcyclists died and approximately 49,000 were injured in highway crashes in the United States.
- Per mile traveled in 1998, a motorcyclist is approximately 14 times more likely to die in a crash than an automobile occupant.
- Head injury is a leading cause of death in motorcycle crashes.
- An unhelmeted motorcyclist is 40 percent more likely to incur a fatal head injury and 15 percent more likely to incur a nonfatal injury than a helmeted motorcyclist when involved in a crash.
- NHTSA estimates that motorcycle helmets reduce the likelihood of a fatality by 29 percent in a crash.
- The Crash Outcome Data Evaluation System (CODES) study found that motorcycle helmets are 67 percent effective in preventing brain injuries and that unhelmeted motorcyclists involved in crashes were three times more likely to suffer brain injury than those using helmets.
- From 1984 through 1998, NHTSA estimates that helmets saved the lives of 8,974 motorcyclists. If all motorcycle operators and passengers had worn helmets during those years, NHTSA estimates that 7,124 additional lives would have been saved.
- A study conducted at the University of Southern California, which analyzed 3,600 traffic crash reports covering motorcycle crashes, concluded that helmet use was the single most important factor governing survival in motorcycle crashes.
- In a recent study, the National Public Service Research Institute concluded that wearing motorcycle helmets does not restrict a rider's ability to hear auditory signals or see a vehicle in an adjacent lane.
- All motorcycle helmets sold in the United States are required to meet Federal Motor Vehicle Safety Standard 218, the performance standard which establishes the minimum level of protection helmets must afford each user.
- Helmet use laws governing all motorcycle riders significantly increase helmet use and are easily enforced because of the rider's high visibility. In NHTSA's latest survey, helmet use was reported to be essentially 100 percent at sites with helmet use laws governing all motorcycle riders, as compared to 34 to 54 percent at sites with no helmet use laws or laws limited to minors.
- Data on crashes in states where only minors are required to wear helmets show that fewer than 40 percent of the fatally injured minors are wearing helmets even

- though the law requires them to do so. Helmet laws that govern only minors are extremely difficult to enforce.
- Public support for motorcycle helmet laws in the United States is very strong: more than four out of five (82 percent) persons ages 16 and older support such laws according to NHTSA's 1995 Motor Vehicle Occupant Safety Survey (DOT HS 808 334). Of those motorcyclists who had ridden a motorcycle in the preceding year, 62 percent said they support motorcycle helmet laws.
- In 1976, the Highway Safety Act was amended to remove sanctions against states without motorcycle helmet laws. Between 1976 and 1980, when compared to 1975—the year before repeals began—motorcycle fatalities increased 61 percent while motorcycle registrations increased only 15 percent.
- Caution must be employed when comparing states to each other with motorcycle crash statistics. States differ in their propensities for motorcycle fatalities. The most accurate method of evaluating the impact of traffic safety measures is to compare the state's crash experience against itself.
- Reported helmet use rates for fatally injured motorcyclists in 1998 were 54 percent for operators and 45 percent for passengers, compared with 57 percent and 49 percent, respectively, in 1997.

Legislative Status

- Currently 21 states, the District of Columbia, and Puerto Rico require helmet use of all motorcycle operators and passengers. In another 26 states, only persons under a specific age, usually 18, are required to wear helmets. Three states have no law requiring helmet use.
- Data from Louisiana, the first state to repeal and then readopt a full helmet law, showed a 30 percent reduction in fatalities (40 fewer deaths) during 1982, the first year after helmet law re-enactment. The reduction occurred even though motorcycle registrations increased 6 percent during the year. The helmet use rate increased from roughly 50 percent to 96 percent.
- Since 1989, six states (Oregon, Nebraska, Texas, Washington, California, and Maryland) have enacted helmet use laws that govern all motorcycle occupants. In Oregon, there was a 33 percent reduction in motorcycle fatalities the year after its helmet law was re-enacted; Nebraska experienced a 32 percent reduction in the first year of its law; Texas experienced a 23 percent reduction; Washington experienced a 15 percent reduction; California experienced a 37 percent reduction; and Maryland experienced a 20 percent reduction.
- Arkansas, Texas, Kentucky, and Louisiana recently weakened their universal helmet laws to mandate coverage to those under the age of 21 years. These became the first states since 1983 to repeal or weaken a universal helmet law.

Cost Savings

- Analysis of linked data for three states with universal helmet laws in the Crash Outcome Data Evaluation System (CODES) showed that without the helmet law, the total extra inpatient charges due to brain injury would have been almost doubled from \$2,325,000 to \$4,095,000.
- A number of studies have been conducted that compare hospital costs for helmeted and nonhelmeted motorcyclists involved in traffic crashes. They have found unhelmeted riders involved in crashes are less likely to have insurance and more likely to have higher hospital costs than helmeted riders involved in similar crashes.
- The CODES study, mentioned earlier, also found that brain injury cases were more than twice as costly as nonbrain injury cases for the one-year period studied. Among the unhelmeted motorcycle inpatients, charges for those suffering brain injuries were 2.75 times higher than for those without brain injuries. Long-term costs are not included.
- NHTSA estimates that motorcycle helmet use saved \$669 million in 1998 alone. An additional \$454 million would have been saved if all motorcyclists had worn helmets.
- NHTSA estimates that motorcycle helmet use saved \$12.1 billion in economic costs from 1984 to 1998. An additional \$10.4 billion would have been saved if all motorcyclists had worn helmets during the same time period.
- In Louisiana, the average cost per motorcycle crash decreased by 48 percent from 1981 to 1982, the first year of its helmet use law. Dramatic differences were found in hospital stay lengths between helmeted and nonhelmeted riders.

Who Supports Universal Motorcycle Helmet Laws?

- AAA
- Advocates for Highway and Auto Safety
- Allstate Insurance Company
- American Academy of Family Physicians
- American Academy of Orthopaedic Surgeons
- American Association of State Highway and Transportation Officials
- American Academy of Pediatrics
- American College of Emergency Physicians
- American College of Preventive Medicine
- American Driver and Traffic Safety Education Association
- American Insurance Association
- American Medical Association
- American Public Health Association
- American Trauma Society
- Association for the Advancement of Automotive Medicine
- Association of Women's Health, Obstetrics, and Neonatal Nurses

- Automotive Coalition for Traffic Safety, Inc.
- Brain Injury Association
- Center for Rural Emergency Medicine
- Emergency Nurses Association
- Emergency Nurses CARE
- Epilepsy Foundation of America
- GEICO
- General Federation of Women's Clubs
- Indian Health Service
- Motorcycle Industry Council
- National Association of County and City Health Officials
- National Association of Orthopaedic Nurses
- National Association of Public Hospitals
- National Association of Emergency Medical Technicians
- National Association of State EMS Directors
- National Association of State Head Injury Administrators
- National Center for Injury Prevention and Control
- National Conference of Black Mayors
- National Flight Nurses Association
- National Safety Council
- National Sheriffs Association
- Nationwide Insurance
- Native American Injury Prevention Coalition
- Prudential Insurance
- State and Territorial Injury Prevention Directors Association
- Students Against Destructive Decisions
- State Farm Insurance
- Think First Foundation
- Wellness Councils of America

Information Sources

Without Motorcycle Helmets We All Pay the Price. U.S. Department of Transportation, August 1998 (DOT HS 808 600). Consolidates motorcycle helmet effectiveness information by documenting the life- and cost-saving benefits of motorcycle helmets and the effectiveness of motorcycle helmet laws. The multimedia package discusses NHTSA's comprehensive approach to motorcycle safety and makes three points: (1) motorcycle helmets save lives and reduce head injuries to motorcyclists in crashes; (2) helmet laws for all riders increase helmet usage; and (3) helmet laws reduce the societal costs resulting from injuries and fatalities in motorcycle crashes.

The Effect of Helmet Law Repeal on Motorcycle Fatalities: A Four-Year Update. NHTSA Research Notes, September 1989. This report estimates fatalities increased about 20 percent in states that repealed helmet use laws.

The Effect of Helmets in Preventing Fatalities. U.S. Department of Transportation, March 1989 (DOT HS 807 416). This publication presents the data and analysis used to determine that motorcycle helmets are 29 percent effective in preventing fatalities.

The Effects of Motorcycle Helmets Upon Seeing and Hearing. U.S. Department of Transportation, February 1994 (DOT HS 808 399). The study examined how wearing a helmet affected motorcycle riders' ability to: (1) visually detect the presence of vehicles in adjacent lanes before changing lanes; and (2) detect

traffic sounds when operating at normal highway speeds. Results indicated that wearing a helmet does not restrict the likelihood of seeing a vehicle in an adjacent lane or the ability to hear auditory signals.

Impact of Re-enactment of the Motorcycle Helmet Law in Louisiana. U.S. Department of Transportation, December 1984 (DOT HS 806 760). This report documents the effect of Louisiana's helmet law on injuries, fatalities, and costs. The repeal and subsequent re-enactment of Louisiana's helmet use law offer unique and valuable data to conduct this systematic study.

The Crash Outcome Data Evaluation System (CODES): Technical Report. U.S. Department of Transportation, January 1996 (DOT HS 808 338). This document presents state-specific results from the CODES project. These results show that safety belts and motorcycle helmets are effective in reducing fatalities and injuries. This report also indicates that safety belt and motorcycle helmet use saves millions of dollars in direct medical costs.

Report to Congress on The Benefits of Safety Belts and Motorcycle Helmets. U.S. Department of Transportation, February 1996 (DOT HS 808 347). The study employed methods whereby statewide data from police crash reports, emergency medical services, hospital emergency departments, hospital discharge files, claims, and other sources were linked so that those people injured in motor vehicle crashes could be followed through the health care system. Information for both the injured and uninjured was then used to determine the benefits of protective devices in motor vehicle crashes.

Motorcycle Accident Cause Factors and Identification of Countermeasure, Volume 1: Technical Report. University of Southern California, Los Angeles, U.S. Department of Transportation, January 1981 (DOT HS 805 862). This report presents the data and findings from on-scene, in-depth investigations of 900 motorcycle crashes and the analysis of 3,600 traffic crash reports of motorcycle crashes in the same study area.

Report to Congressional Requesters—Highway Safety:
Motorcycle Helmet Laws Save Lives and Reduce Costs to
Society. U.S. General Accounting Office, July 1991 (GAO/
RCED-91-170). This report evaluates studies on motorcycle
helmet laws. The report summarizes each study's findings on:
(1) the effectiveness of helmets in preventing deaths and serious
injuries; (2) the effect of helmet laws on helmet use and fatality
rates; and (3) the cost that society incurs when nonhelmeted
motorcyclists are involved in crashes. All studies comparing
helmeted riders to nonhelmeted riders found that all helmeted
riders had a lower fatality rate.

Motorcycle Helmets: The Facts of Life. U.S. Department of Transportation, revised October 1996 (DOT HS 807 603). This eight-panel brochure summarizes the life- and cost-saving benefits of motorcycle helmets and discusses issues surrounding the enactment of universal motorcycle helmet laws.

STATUS OF STATE MOTORCYCLE HELMET USE REQUIREMENTS January 2000

21 States, D.C. and P.R. Required Use For All Riders

Alabama California

District of Columbia

Florida

Georgia

Maryland

Massachusetts

Michigan

Mississippi

Missouri

Nebraska

Nevada

New Jersey

New York

North Carolina

Oregon

Pennsylvania

Puerto Rico

Tennessee

Vermont

Virginia

Washington

West Virginia

26 States Require Use For A Specific Segment of Riders (Usually Under 18)

Alaska

Arizona

Arkansas

Connecticut

Delaware (1)

Hawaii

Idaho

Indiana

Kansas

Kentucky (2)

Louisiana (3)

Maine (4)

Minnesota

Montana

New Hampshire

New Mexico

North Dakota

Ohio (5)

Oklahoma

Rhode Island (6)

South Carolina

South Dakota

Texas (7)

Utah

Wisconsin

Wyoming

Not Required In 3 States

Colorado

Illinois

Iowa

- 1. Riders under 19 must wear helmets and helmets must be in the possession of other riders, even though use is not required.
- 2. Required for riders under 21, riders operating a motorcycle with an instruction permit, riders with less than one-year experience, and/or riders who do not provide proof of health insurance to county clerk.
- 3. Required for riders under 18 and those who do not have a health insurance policy with medical benefits of at least \$10,000. Proof of policy must be shown to law enforcement officer upon request.
- 4. Required for riders under 15, novices, and holders of learner's permits.
- 5. Riders under 18 and first year novices are also required to wear helmets.
- 6. Riders under 21 and first year operators must wear helmets.
- 7. Required for riders 20 and under and those who have not completed a rider training course or who do not have \$10,000 medical insurance coverage.

The reports and additional information are available from your State Highway Safety Office, the NHTSA Regional Office serving your State, or from NHTSA Headquarters, Traffic Safety Programs, ATTN: NTS-15, 400 Seventh Street, S.W., Washington, DC 20590; 202-366-1739.